

COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Valley Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS
Significant Permit Modification

Lees Carpets Division of Mohawk Industries, Inc.
Glasgow, Rockbridge County, Virginia
Permit No. VRO80269
Effective Date: July 26, 2001
Expiration Date: July 26, 2006

As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Lees Carpets Division of Mohawk Industries, Inc. has applied for a significant permit modification to the Title V Operating Permit for its commercial carpet manufacturing facility in Glasgow, Virginia. The Department has reviewed the application and has prepared a modified Title V Operating Permit.

Engineer/Permit Contact: _____

Date: 10/25/05

Air Permit Manager: _____

Date: 10/25/05

for Deputy Regional Director: _____

Date: _____

REQUESTED MODIFICATION

The Valley Regional Office of the Department of Environmental Quality (DEQ) received requests from Lees Carpets Division of Mohawk Industries, Inc. (Lees Carpets) on April 28, 2005 and May 9, 2005, including supplemental information received on July 1, 2005, for changes to its Title V operating permit. Since the second request was received within a short time period after the initial request, both requests have been combined and are being processed as one application. The changes, listed below, are considered a significant modification to the permit, as defined in 9 VAC 5-80-230. Lees Carpets has requested that the permit be changed to:

- Include the permit conditions that have been changed from Lees Carpets' minor NSR permit dated November 8, 2002, as amended June 29, 2005, to modify and operate a carpet manufacturing facility (Section VI);
- Include the permit conditions that have been changed from Lees Carpets' minor NSR permit dated March 22, 2002, as amended June 29, 2005, to construct and operate a PVC foamback line equipped with a 1.5 MMBtu/hr curing oven (PVC2) and modify and operate a PVC carpet backing line (PVC1) and a calcium carbonate storage silo (PVCS-C1) (Section VIII);
- Change the name and title of the responsible official (Section I); and
- Revise the name for the facility and permittee.

REASON FOR MODIFICATION

On June 29, 2005, Lees Carpets' minor NSR permit dated November 8, 2002 to modify and operate a carpet manufacturing facility was amended to establish an hourly throughput limit of 119 pounds of yarn per hour for the #1 Suessen heat set line (HS1), a set point temperature of 175°F for the oil mist collector cooling coil that controls particulate emissions from the #1 Suessen heat set line (HS1) and a maximum outlet air temperature of 190°F for the oil mist collector cooling coil. These requirements were requested by Lees Carpets in response to a Consent Order issued to the facility due to the failing of a stack test conducted on September 24, 2004 to demonstrate compliance with the particulate matter (PM) and particulate matter with an aerodynamic diameter less than or equal to 10 micrometers (PM-10) emission limits of 0.10 pounds per hour each. These requirements were based on a second stack test conducted by Lees Carpets that demonstrated compliance with the PM and PM-10 emissions limits. Accordingly, the permit was amended to include these requirements. Additionally, all reference to the #2 Suessen heat set line (HS2) was removed because Lees Carpets decided not to construct this emission unit. As a result, the changes to the applicable requirements are represented in the following permit conditions from the minor NSR permit dated November 8, 2002, as amended June 29, 2005. Condition numbers refer to those contained in the amended NSR permit. A copy of the permit is included as Attachment A.

- Condition 3: Particulate matter emissions from the Suessen yarn heat set machine (Unit #1) shall be controlled by an oil mist collector. The oil mist collector shall be provided with adequate access for inspection and shall be in operation when the process is operating.
- Condition 4: The oil mist collector cooling coil shall maintain a set point temperature of 175°F.
- Condition 5: The oil mist collector cooling coil outlet air temperature shall not exceed 190°F.
- Condition 6: The oil mist collector shall be equipped with devices to continuously measure the differential pressure drop across the filter, the cooling coil set point temperature and the cooling coil inlet air temperature. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the control device is operating.
- Condition 7: The oil mist collector shall be equipped with devices to continuously measure and record the cooling coil outlet air temperature. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the control device is operating.
- Condition 8: The oil mist collector monitoring devices used to continuously measure the differential pressure drop across the filter, the cooling coil set point temperature and the cooling coil inlet air temperature shall be observed by the permittee with a frequency of not less than once per day. The permittee shall keep a log of the observations of the oil mist collector monitoring devices.
- Condition 9: The oil mist collector monitoring devices used to continuously measure and record the cooling coil outlet air temperature shall be observed by the permittee with a frequency of not less than once per day. The permittee shall keep a log of the observations of the oil mist collector monitoring devices.

- Condition 11: Stack 1, exhausting the Suessen yarn heat set machine (Unit #1), shall be a minimum of 41 feet above ground level with an unobstructed vertical discharge, in order to comply with ambient air quality standards for PM-10.
- Condition 12: The throughput of yarn through the Suessen yarn heat set machine (Unit #1) shall not exceed 119 pounds per hour.
- Condition 13: Emissions from Stack 1, exhausting the Suessen yarn heat set machine (Unit #1), shall not exceed the limits specified below:
- | | | |
|--------------------|------|-------|
| Particulate Matter | 0.10 | lb/hr |
| PM-10 | 0.10 | lb/hr |
- Condition 14: Visible emissions from Stack 1, exhausting the Suessen yarn heat set machine (Unit #1), shall not exceed 10% opacity as determined by EPA Method 9 (reference 40 CFR Part 60, Appendix A). This condition applies at all times except during startup, shutdown and malfunction.
- Condition 15: Requirements for maintaining records of all emission data and operating parameters for the Suessen yarn heat set machine (Unit #1) to demonstrate compliance.

Due to the issuance of this amended minor NSR permit, the Title V permit should be modified to include the changes to the applicable requirements.

On June 29, 2005, Lees Carpets' minor NSR permit dated March 22, 2002 to construct and operate a PVC foamback line equipped with a 1.5 MMBtu/hr curing oven (PVC2) and modify and operate a PVC carpet backing line (PVC1) and a calcium carbonate storage silo (PVCS-C1) was amended to increase the hourly particulate matter (PM) and the daily PVC plastisol formula throughput for the PVC carpet backing line (PVC1) to meet anticipated market demand. The hourly PM emission limit was increased from 0.30 pounds per hour to 0.65 pounds per hour and the plastisol throughput was increased from 141.6 tons per day to 283.5 tons per day. Emissions from the PVC carpet backing line (PVC1) also included PM-10 and volatile organic compounds (VOC). Consequently, emission limits for PM-10 and VOC were included in the amended minor NSR permit. Additionally, Lees Carpets is a major source of hazardous air pollutants and is subject to the promulgated maximum achievable control technology (MACT) standard in 40 CFR 63, Subpart OOOO - Printing, Coating and Dyeing of Fabrics and Other Textiles. Therefore, the state air toxic condition (Condition 17) for the PVC foamback line equipped with a 1.5 MMBtu/hr curing oven (PVC2) is no longer applicable and the requirement was removed from the minor NSR permit. As a result, the changes to the applicable requirements are represented in

the following permit conditions from the minor NSR permit dated March 22, 2002, as amended June 29, 2005. Condition numbers refer to those contained in the amended NSR permit. A copy of the permit is included as Attachment B.

Condition 12: The throughput of plastisol formula to the PVC carpet backing line (PVC1) shall not exceed 283.5 tons/day, calculated daily.

Condition 16: Emissions from the operation of the PVC carpet backing line (PVC1) shall not exceed the limits specified below:

Particulate Matter	0.65 lbs/hr	1.50 tons/yr
PM-10	0.65 lbs/hr	1.50 tons/yr
Volatile Organic Compounds		5.81 tons/yr

Condition 20: Requirements for maintaining records of all emission data and operating parameters for the PVC carpet backing line (PVC1) to demonstrate compliance.

Due to the issuance of this amended minor NSR permit, the Title V permit should be modified to include the changes to the applicable requirements.

Lees Carpets indicated the name and title of the facility's responsible official has changed. Also, the facility name and the permittee name have been revised from Lees Carpets Division and Mohawk Industries, Inc. to Lees Carpets and Lees Carpets Division of Mohawk Industries, Inc., respectively. As a result, the name and title of the facility's responsible official and all references to the facility name and permittee name will be changed in the Title V permit accordingly.

APPLICABILITY OF 9 VAC 5-80-230

According to 9 VAC 5-80-230, significant modification procedures must be used for those permit modifications that do not qualify as minor permit modifications under 9 VAC 5-80-210 or as administrative amendments under 9 VAC 5-80-200. Lees Carpets' proposal does not meet the specifications for an administrative amendment or a minor permit modification. The Regulations further list criteria, any of which, if met, require use of significant modification procedures. The changes proposed by Lees Carpets meet the following criterion, stated in 9 VAC 5-80-230.A.1:

Significant modification procedures shall be used for those permit modifications that involve significant changes to existing monitoring, reporting, or recordkeeping requirements in the permit, such as a change to the method of monitoring to be used, a change to the method of

demonstrating compliance or a relaxation of reporting or recordkeeping requirements.

Lees Carpets' current Title V permit does not include the changes to the applicable requirements from the minor NSR permit dated November 8, 2002, as amended June 29, 2005, to modify and operate a carpet manufacturing facility and the minor NSR permit dated March 22, 2002, as amended June 29, 2005, to construct and operate a PVC foamback line equipped with a 1.5 MMBtu/hr curing oven (PVC2) and modify and operate a PVC carpet backing line (PVC1) and a calcium carbonate storage silo (PVCS-C1). The permit will be modified to incorporate the changes to the applicable requirements from these amended minor NSR permits that include monitoring and recordkeeping requirements. Therefore, the permit modification involves significant changes to existing monitoring and recordkeeping requirements and the method of demonstrating compliance.

Because the changes proposed by Lees Carpets meet at least one criterion listed in 9 VAC 5-80-230 and do not qualify as an administrative amendment or a minor permit modification, the changes must be processed as a significant permit modification.

CHANGES TO TITLE V OPERATING PERMIT

The changes made to the Title V permit under Lees Carpets' proposal are shown below.

Process Equipment Requirements – Yarn Processing Line (Heat Setting) (HS1)

The following conditions have been removed due to the requested changes. Please note the section and condition numbers refer to the current Title V permit with an effective date of July 26, 2001, an amendment date of July 27, 2001, a significant modification date of August 28, 2002 and an amendment date of January 22, 2004.

<u>Section VI:</u>	All references to the #2 Suessen heat set line (HS2) have been removed because the facility decided not to construct this emission unit.
<u>Condition VI.A.6:</u>	This condition has been removed because it is no longer applicable since the facility decided not to construct the #2 Suessen heat set line.
<u>Condition VI.C.2:</u>	This condition has been removed because the required initial performance tests for particulate matter have been completed and demonstrated compliance.

- Condition VI.C.3: This condition has been removed because the required visible emissions evaluation has been completed and demonstrated compliance.
- Condition VI.D.1: This condition has been removed because the notification requirements are no longer applicable since the #2 Suessen heat set line will not be constructed and the performance tests have been completed.

Limitations

The following conditions in the Title V permit include the requirements from Conditions 3, 4, 5, 11, 12, 13 and 14 of the minor NSR permit dated November 8, 2002, as amended June 29, 2005. Condition numbers refer to the modified Title V permit.

- Condition VI.A.1: Particulate matter emissions from the #1 Suessen heat set line (HS1) shall be controlled by an oil mist collector. The oil mist collector shall be provided with adequate access for inspection and shall be in operation when the processes are operating.
- Condition VI.A.2: The oil mist collector cooling coil shall maintain a set point temperature of 175°F.
- Condition VI.A.3: The oil mist collector cooling coil outlet air temperature shall not exceed 190°F.
- Condition VI.A.4: The exhaust stack (HS1) for the #1 Suessen heat set line shall be a minimum of 41 feet above ground level with an unobstructed vertical discharge in order to comply with the ambient air quality standards for PM-10.
- Condition VI.A.5: The throughput of yarn through the #1 Suessen heat set line shall not exceed 119 pounds per hour.
- Condition VI.A.6: Visible emissions from the exhaust stack (HS1) for the #1 Suessen heat set line shall not exceed ten percent (10%) opacity as determined by EPA Method 9 (reference 40 CFR Part 60, Appendix A). This condition applies at all times except during startup, shutdown and malfunction.

Condition VI.A.7: Emissions from the exhaust stack (HS1) for the #1 Suessen heat set line shall not exceed the limits specified below:

Particulate Matter	0.10	lbs/hr
PM-10	0.10	lbs/hr

Monitoring and Recordkeeping

The following conditions in the Title V permit include the monitoring requirements from Conditions 6, 7, 8 and 9 of the minor NSR permit dated November 8, 2002, as amended June 29, 2005. Condition numbers refer to the modified Title V permit.

Condition VI.B.1: The oil mist collector shall be equipped with devices to continuously measure the differential pressure drop across the filter, the cooling coil set point temperature and the cooling coil inlet air temperature. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the control device is operating.

Condition VI.B.2: The oil mist collector shall be equipped with devices to continuously measure and record the cooling coil outlet air temperature. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the control device is operating.

Condition VI.B.3: The oil mist collector monitoring devices used to continuously measure the differential pressure drop across the filter, the cooling coil set point temperature and the cooling coil inlet air temperature shall be observed by the permittee with a frequency of not less than once per day. The permittee shall keep a log of the observations of the oil mist collector monitoring devices.

Condition VI.B.4: The oil mist collector monitoring devices used to continuously measure and record the cooling coil outlet air temperature shall be observed by the permittee with a frequency of not less than once per day. The permittee shall keep a log of the observations of the oil mist collector monitoring devices.

The following condition in the Title V permit has been modified to include the recordkeeping requirements from Condition 15 of the minor NSR permit dated November 8, 2002, as amended June 29, 2005. The condition number refers to the modified Title V permit.

- Condition VI.B.6: The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Valley Region. These records shall include, but are not limited to:
- Daily observations of the differential pressure drop across the oil mist collector filter, the oil mist collector cooling coil set point temperature and the oil mist collector cooling coil inlet and outlet air temperatures.
 - Continuous measurements of the oil mist collector cooling coil outlet air temperature.
 - Hourly throughput of yarn, in pounds, through the #1 Suessen heat set line (HS1).
 - Training and all scheduled and non-scheduled maintenance as required by Condition VI.A.8.
 - All stack tests, VEEs and performance evaluations.
 - The pollutant-specific emission factors and equations used to demonstrate compliance with Condition VI.A.7.
 - Inspection records as required by Conditions VI.B.3, VI.B.4 and VI.B.5.

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years.

Process Equipment Requirements – Carpet Backing Lines (L1, LCS, VAES, PVC1, PVC2, PVCS, HM1, HMM and RHMM)

The following condition has been removed from the Title V permit for the reason provided. Please note the condition number refers to the current Title V permit with an effective date of July 26, 2001, an amendment date of July 27, 2001, a significant modification date of August 28, 2002 and an amendment date of January 22, 2004.

- Condition VIII.A.26: This state air toxics condition has been removed because it is no longer applicable to the PVC foamback line equipped with a 1.5 MMBtu/hr curing oven (PVC2) since the facility is a major source of hazardous air pollutants and is subject to the promulgated maximum achievable control technology (MACT) standard in 40 CFR 63, Subpart OOOO - Printing, Coating and Dyeing of Fabrics and Other Textiles.

Limitations

The following conditions in the Title V permit include the requirements from Conditions 12 and 16 of the minor NSR permit dated March 22, 2002, as amended June 29, 2005. Condition numbers refer to the modified Title V permit.

Condition VIII.A.16: The throughput of plastisol formula to the PVC carpet backing line (PVC1) shall not exceed 283.5 tons per day, calculated daily.

Condition VIII.A.25: Emissions from the operation of the PVC carpet backing line (PVC1) shall not exceed the limits specified below:

Particulate Matter	0.65	lbs/hr	1.50	tons/yr
PM-10	0.65	lbs/hr	1.50	tons/yr
Volatile Organic Compounds			5.81	tons/yr

Annual emissions shall be calculated monthly as the sum of each consecutive twelve (12) month period.

Recordkeeping

The following condition in the Title V permit has been modified to include the recordkeeping requirements from Condition 19 of the minor NSR permit dated March 22, 2002, as amended June 29, 2005. The condition number refers to the modified Title V permit. Please note only the changes to the condition are shown below.

Condition VIII.C: The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Valley Region. These records shall include, but are not limited to:

2. Air pollution control equipment training provided and all scheduled and non-scheduled maintenance as required by Condition VIII.A.26.
5. Daily and annual throughput of latex (in tons) used in the PVC carpet backing line (PVC1). Annual throughput shall be calculated monthly as the sum of each consecutive twelve (12) month period.
10. Hourly particulate matter and PM-10 emissions (in pounds) from the PVC carpet backing line (PVC1), calculated as a daily average.

11. Annual particulate matter, PM-10 and volatile organic compound emissions (in tons) from the PVC carpet backing line (PVC1). Annual emissions shall be calculated monthly as the sum of each consecutive twelve (12) month period.
13. Material Safety Data Sheets (MSDS) or other vendor information showing VOC content, HAP content, water content and solids content for each component of the latex.

In addition to the changes discussed above, the following changes have been made to the Title V permit:

- General Conditions (Section XII) have been updated to more closely reflect current regulations and regulatory citations;
- the date of the minor NSR permit for the #1 Suessen heat set line has been updated in tables and citations to include the amendment date of June 29, 2005; and
- the date of the minor NSR permit for the PVC carpet backing line, which includes the PVC foamback line equipped with a 1.5 MMBtu/hr curing oven (PVC2) and calcium carbonate storage silo, has been updated in tables and citations to include the amendment date of June 29, 2005.

The Title V permit has also been changed to include a new section (Section IX), Hazardous Air Pollutant Conditions. As a major source of hazardous air pollutants (HAPs), Lees Carpets is subject to two rules in 40 CFR Part 63 (National Emission Standards for HAPs (NESHAPs) from Source Categories). The applicable rules are as follows:

- Printing, Coating, and Dyeing of Fabrics and Other Textiles NESHAP (40 CFR Part 63, Subpart OOOO): applicable to the fabric and other textiles printing, coating and dyeing operations. Compliance date: May 29, 2006.
- Industrial, Commercial, and Institutional Boilers and Process Heaters NESHAP (40 CFR Part 63 Subpart DDDDD): applicable to the boilers. Compliance date: September 13, 2007.

This section includes requirements to comply with each NESHAP listed above by the corresponding compliance date unless the facility obtains federally enforceable limits on its facility-wide emissions of HAPs to below major-source thresholds (“synthetic minor HAP limits”) prior to the compliance dates. Because of Lees Carpets’ plans to become a synthetic minor HAP source, details of each NESHAP have not been incorporated into the proposed permit. If Lees Carpets does not become a synthetic minor source, its Title V permit will need to be modified during the renewal term to include detailed compliance requirements (including all control, operational, work practice, monitoring, recordkeeping, reporting, and testing requirements, as applicable) from each NESHAP.

PUBLIC PARTICIPATION

The public participation requirements of 9 VAC 5-80-270 apply to significant permit modifications. Accordingly, a 30-day public comment period was announced in the Rockbridge Weekly on September 7, 2005. The public comment period expired on October 7, 2005.

The requirements of 9 VAC 5-80-290 for review by EPA and affected states apply to significant permit modifications. EPA was notified of the public notice and sent a copy of the draft permit on September 7, 2005. The 45-day EPA review period expired on October 22, 2005 with no comments received. The only state meeting the definition of affected state (see 9 VAC 5-80-60) is West Virginia. West Virginia was notified of the drafting of the significant modification at the beginning of the public comment period. No comments were received from the affected state.

ATTACHMENTS

Attachment A – November 8, 2002 Minor NSR Permit, As Amended June 29, 2005
Attachment B – March 22, 2002 Minor NSR Permit, As Amended June 29, 2005

ATTACHMENT A

November 8, 2002 Minor NSR Permit, As Amended June 29, 2005

ATTACHMENT B

March 22, 2002 Minor NSR Permit, As Amended June 29, 2005